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Effects of globalization and corporate downsizing on employee health

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The Effects of Globalization and Corporate Downsizing On Employee Health

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Abstract

The purpose of this study was to assess the impact of corporate downsizing; a function of globalization, on the self-reported physical and mental health of unionized individuals employed in the primary sector of the workforce.

An analysis of the literature revealed that downsizing negatively affected the physical and mental health of survivors of job cutbacks and their respective family members. Survivors of job cutbacks had worse self rated health and higher rates of long standing illness than their unaffected counterparts. Downsizing was found to have a negative impact on the nature of work and social relationships. Job insecurity; or perceived job insecurity, perpetuated by impending or past downsizing in the workplace was found to have long term negative health consequences. Rather than adjusting over time to stressful working conditions, employees appeared to lose their ability to cope.

The negative health effects of downsizing were not limited to the survivors of job cutbacks. Marital tension in the home increased with increasing levels of perceived job insecurity. Physician consultation, hospital referrals and hospital attendance increased not only among workers who were experiencing or perceived an upcoming period of job insecurity, but increased for the workers respective family members as well.

The results of this study indicated that survivors of job cutbacks suffered poorer health than the general Canadian population. The study also found that a higher proportion of survivors of job cutbacks reported feeling downhearted and depressed than the general Canadian population.

Level of education was significantly correlated to health among survivors of job cutbacks; however, a significant difference in health scores did not exist between respondents who had attained higher and lower levels of education.

Age was associated with higher levels of emotional well being among the sample. Age was not related to perceived health status among survivors of job cutbacks; however, the number of years employed at this organization was significantly related to better health status.

A high level of physical functioning was found among the survey sample; however, it was below that of the general Canadian population. Survivors of job cutbacks also appeared to suffer more interference with their normal work activities (both inside and outside the home) as a result of pain than the general Canadian population.

Limitations of this study were discussed and included potential sampling bias due to the low number of survey respondents.

Finally, six recommendations were put forward for the consideration of government agencies and policy makers, labour organizations and union officials; as well as, health professionals in an effort to protect and improve the health of the Canadian workforce.

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1.0 Introduction

1.1 Introduction

In response to declining economic circumstances there have always been corporations and businesses who found workforce reduction a necessity for survival (Friedrich, 1997). However, economic recession and deregulation of the labour market during the 1990's resulted in major downsizing of the workforce and changes to employment contracts in most post-industrial countries (Ferrie, 2004). Restructuring during this period involved downsizing, privatization, mergers and closures which led to an unprecedented rise in job losses among workers in the primary labour market (Ferrie, 2001). "In today's economic market it is not unusual for large corporations to continue downsizing the workforce while profits are high, sacrificing the interests of employees and communities for those of CEO's and shareholders" (Foley & Polyani, 2006, p. 184).

An association has been established between downsizing and negative health outcomes. Survivors of cutbacks experience job insecurity, increased workloads and a general sense of demoralization. Emerging evidence suggests that downsizing has negative, long-term physical and mental health consequences. A spill over effect on the health and well-being of employee family members has also been established. Downsizing may affect entire communities. "As the local economy declines, small businesses respond by laying off workers, and property values decrease" (Friedrich, 1997, p. 357).

Downsizing has been shown to contribute to the burden faced by health care providers and the health care system. The Public Health Agency of Canada reports that increased workload; or role overload, has driven health care costs higher. The agency estimates that doctor's visits could be cut by 25%, and hospital stays by 17% if the issue was properly addressed (Leslie, 2004). Felix (cited in Foley and Polanyi, 2006, p. 178) estimated that "stress due to overwork is costing Canadian taxpayers approximately 12 billion in lost productivity and other costs. Canadian claims related to stress have risen from 10% to more than 30% of all disability claims".

Currently, the downsizing phenomenon by governments, industry and large transnational corporations continues with no end in sight. Downsizing has the potential to impact the health of employees, their families and entire communities. Research related to the physical and mental health effects of downsizing is currently limited. More research is required to protect, maintain or improve the health of the workforce and maintain a productive society.

1.2 Summary of Purpose of Research

The purpose of this study is to assess the impact of corporate downsizing; a function of globalization, on the self-reported physical and mental health of unionized individuals employed in the primary sector of the workforce.

1.3 Objectives

1. To review current literature related to the known impact of globalization and corporate downsizing on employee health.

2. To identify a survey instrument that will provide a measure of general health status and determine the effect of corporate downsizing on employee health.
3. To assess the relationships between self-reported health and negative physical and mental health outcomes in the target population.

1.4. Conceptual Framework

Globalization, corporate downsizing, and workforce rationalization strongly impact the key determinants of health; therefore, the population health framework was chosen for this study. A negative or positive impact on one determinant can trigger a chain reaction that will positively or negatively influence all key determinants of health.

Globalization through corporate downsizing not only has the potential to affect the health determinants of the individual employee but can also impact the employee's family, community, or region.

1.4.1. Population Health Framework

The population health framework was developed in 1989 by the Canadian Institute of Advanced Research (CIAR). The Public Health Agency of Canada (PHAC) states that the population health approach "aims to improve the health of an entire population and reduce inequities among population groups" (PHAC, 2002a). The population health approach recognizes that health is a capacity or resource, and that a range of social, economic, and physical environmental factors contribute to an individual's health (PHAC, 2002a).

The determinants of health that are directly impacted by globalization include: income, social status (environment), employment (prosperity) and working conditions. Employees caught in the downsizing trend face threats to income, a decrease in income or a loss of income; all of which have the potential to directly affect their socio-economic status and physical environment.

Globalization has spawned a fiercely competitive global economic market. Increased competitiveness has placed increased pressure and demands on survivors of cutbacks. These factors have led to high levels of workplace stress, and the development of various health problems related to working long hours and job insecurity (PHAC, 2004). Communities where the local economy is predominantly made up of primary industries have suffered numerous job losses. Job losses in the primary sector in turn place service jobs in the secondary industry at risk. Applying the population health framework, one can see the potential health risk this poses to the entire community, which has been affected by globalization, corporate downsizing and workforce rationalization.

2.0 Literature Review

2.1. Introduction

2.1.1. What is Globalization?

Globalization is "the dominant economic force in the world today" (Patten & Dolan, 2002, p. 2). Friedman describes globalization as "an overarching international system, with its own rules and logic, shaping the domestic policies and foreign relations of virtually every country" (cited in Patten & Dolan, 2002, p. 2). Globalization is "the creation of a single worldwide economy with universal rules set up by and for the private sector" (Barlow, 2002, p. 2).

The characteristics of globalization include: increased trade, trade liberalization, government downsizing, privatization and deregulation of public services (Patten & Dolan, 2002, p. 2). Globalization has spawned many international free trade agreements over past decades. The three most significant to Canadians, population health, and the health care system include: the North America Free Trade Agreement (NAFTA), the General Agreement on Trade and Services (GATS) and the proposed Free Trade of the Americas Agreement (FTAA).

Implemented on January 1, 1994, NAFTA is a trade agreement that phased out tariffs and removed barriers to free trade between Canada, the United States of America (USA), and Mexico. Hailed as a framework of rules to encourage equitable and sustainable growth, the main outcomes of NAFTA were the loss of jobs and real income

of workers; increased power of multinational corporations; and decreased scope and power of governments to regulate in the public's interest (Woodhead, n.d.).

The GATS agreement was negotiated between numerous international governments in 1994 and operates under the umbrella of the World Trade Organization (WTO). This agreement seeks to eliminate barriers to trade in services, including those services provided by governments at all levels. The specific public services that fall under GATS include: healthcare, social services, education, food inspection, broadcasting and postal services. Described as "more than just a trade agreement between governments", the European Commission commented that GATS is "first and foremost an instrument for the benefit of business" (National Union, Research, 2000, p. 2). Canada has reserved the right to exclude healthcare from this agreement; however, critics argue that the reservation of healthcare taken by the Canadian government under this agreement is quite limited, weak, and open to exploitation (Barlow, 2002; Romanow, 2002).

The FTAA agreement expanded on NAFTA and GATS to include all nations of Latin America (except Cuba), Canada, the US and Mexico. The meetings were conducted in secret and calls for public input were ignored. The agreement has been under negotiation since 1994 and was expected to be implement on January 1, 2005; however, after many years of opposition from the global community, Venezuela, Argentina, Bolivia, and Brazil refused to sign the agreement. Critics and activists worldwide believed that the potential outcomes of FTAA would have included, "required" privatization of public services, including healthcare, education and other services covered under GATS. One especially troubling development was the speculation that the

FTAA would include the "removal of national licensing standards for medical, legal and other key professionals, allowing doctors licensed in one country to practice in any country, even if their level of training or technological sophistication is different."(Global Exchange, 2005).

2.1.2. Globalization: Corporate Downsizing and Health

Vaherta, Kivimaki, Pentti, et al. (2004), believe that the advent of the global economy has caused downsizing to become an increasingly important trend among industrialized nations. These researchers conducted a 7.5 year prospective cohort study to examine whether downsizing was a predictor of sickness absence and mortality among survivors of job cutbacks during periods of major, minor and no corporate downsizing. Their study found that periods of major downsizing were associated with an increase in sickness absence among permanent employees who had survived job cutbacks and an increased risk of cardiovascular mortality.

Research has repeatedly demonstrated that survivors of workforce rationalization report increased job strain, and low levels of job control. Additionally, employees who have survived job cutbacks also face an increased risk of developing cardiovascular disease (Bosma, Marmot, Hemingway, et al. 1997; Schnall, Landsbergis, & Baker, 1994).

A longitudal cohort study conducted by Kivimaki, Vahtera, Pentti, & Ferri (2000), examined the relationship between corporate downsizing and negative health outcomes in employees over a five year period. Their research established an association between corporate downsizing and negative outcomes in employee health. Downsizing had a negative impact on the nature of work, social relationships, and health related

behaviors. The researchers concluded that multiple mechanisms rather than a single change in work may underlie the adverse effect on health in employees after major downsizing. Research results suggest that corporate downsizing increased morbidity by generating threats of job loss, increased job demands, and lowered job control. In addition, downsizing was also associated with lowered levels of spousal support and an increased prevalence of smoking among employees.

Morris, Cook, & Shaper (1994) discovered a strong association between unemployment and an increased risk of mortality, involving both cancer and cardiovascular disease. The five year prospective cohort study found that unemployed men were twice more likely to die than men who were continuously employed. Men with a stable employment record who suddenly lost employment also suffered an increased risk of dying. Another finding of the study was that unemployed men possessed a poorer overall health status than those who were continuously employed (pp. 1135-1139).

Research (Ferrie, 1999) has established that those experiencing job insecurity associated with privatization had worse self rated health and higher rates of longstanding illness, hypertension, mild psychiatric and general ill-health symptoms. These negative health outcomes were not explained by changes in health behaviors.

An exhaustive research review of research which studied the effects of job insecurity on psychological and physical morbidity, mortality, sickness absence and health service was also conducted by Ferrie (2001). The author found that stress engendered by job insecurity was dependant on the perceived probability and perceived severity of job loss and that perceived job insecurity was the more potent stressor. Job

insecurity was shown to be significantly associated with an increase in work role limitations due to physical and emotional problems. Prolonged periods of job insecurity appeared to increase physical symptoms over and above the effects of job insecurity at any one point in time. A dose-response relationship between job insecurity and all measures of morbidity was found to exist. Many employees experiencing job insecurity or perceived job insecurity suffer sleep disturbances. With the exception of two Scandinavian studies, physiological measures other than blood pressure have been neglected. The author also found that little work has been done that studies the effect of job insecurity on mortality from disease or suicide. Job insecurity and sickness absence has been well documented and findings demonstrate a significant association between medically certified, long-term absences of more than three days and the degree of downsizing. An increase in morbidity was found among employees whose organization or department was facing imminent privatization; however, the data indicated that this aggregate of workers were not taking sick leave despite increasing ill-health. Increased health service use has been associated with job insecurity. Physician consultation, hospital referrals, and hospital attendance not only increased among workers who were experiencing or perceived an upcoming period of job insecurity, but increased for workers' family members as well. The author found other spill over effects of both perceived and attributed job insecurity on family members. Marital tension in the home increased with increasing levels of perceived job insecurity and job insecurity among female workers were found to be associated with low birth weight babies for gestational age.

Research by Burchell et al. (cited in Foley & Polanyi, 2006), has demonstrated that the effects of job insecurity are long-term. Rather than adjusting over time to stressful working conditions, people seem to lose their ability to cope. Their study also found increasing rates of sickness and absenteeism and a reduction in productivity.

A study by Shore (1996) examined the effect of downsizing on employees' psychological and physical health and how their conditions affect organizations. The author believes that downsizing has created three types of victims: 1) the workers who have lost their jobs, 2) employees who have survived the cutbacks but suffer the physical and psychological burdens of a downsized environment and, 3) the organizations which must endure a demoralized workforce and elusive cost savings. Shore's study focuses on cutback survivors who are left behind to cope with a more demanding, complex and demanding workplace. A survey of individuals from a variety of organizations was conducted and data analysis revealed the existence of a psychological response common among survivors of cutbacks which he termed "Post-Downsizing Syndrome" (PDSS). The syndrome is characterized by increases in anxiety about work related issues which eventually affects the employee's health, personal life, and attitudes toward work. The author maintains that stress which develops in a downsized environment differs from traditional job stress; it is long lasting and may reoccur with increasing intensity as job cuts both within the survivor's organization and other companies occur. The author believes that a firm which has downsized several times has set the stage for PDSS.

The health effects of downsizing may not be immediately evident; however, in the long run concrete physical and mental health problems begin to surface. Shore (1999)

suggests that the symptoms may include: sleep disturbance, over or under eating, headaches, increased blood pressure, digestive problems, a general feeling of anxiety, fatigue and muscular tension. Among outcomes related to downsizing were: sleep disturbance, fatigue, headaches.

The Whitehall Studies are long-term studies of men and women, which examined the circumstances of work, home and community and their respective influences on health. The Whitehall Study II (cited in Ferrie, et al., 2004) found many associations between unemployment, working conditions, job control, downsizing and negative health outcomes. Employees in jobs characterized by low job control had higher rates of absenteeism, heart disease, and lower back pain. Lack of support from colleagues and managers in the workplace were associated with worsening mental health; including symptoms of depression, and increased risk of angina. High effort in the workplace must be matched with appropriate rewards. Effort may come from one's individual drive or may be demanded by the work environment. High effort in itself is not stressful; however, high effort without appropriate reward was found to be stressful and found to increase the rate of illness among employees. Reward is measured in three ways: esteem, career opportunities including job security and promotion prospects and financial remuneration. Effort-reward imbalance was found to place workers at an increased risk of heart disease and was also associated with declines in overall physical and social functioning. Perceived job insecurity was found to be a chronic stressor whose effects remained long after removal of the threat. During periods of job insecurity; in the run up to privatization, employees whose department was to be privatized suffered more

physical ill health that their unaffected counterparts. Adverse changes in blood pressure placed workers at greater risk of heart disease. Whitehall II confirmed earlier findings of mental health problems among employees who faced impending privatization and downsizing. Workers who felt insecure in their employment were found to be much more dissatisfied with their jobs. The study also discovered that employees facing privatization were much more likely to seek out the services of a general practitioner. Although organizational change was found to generate feelings of job insecurity, the effects of organizational change were determined to be broader than the effects of job insecurity in itself. Organizational change includes changes to the nature of work and working conditions, change in management style, and occasionally a change in employer. The Whitehall Study II compared a group of civil servants working in agencies and civil servants who expected their work to be transferred to an executive agency with a group of co-workers whose work would remain unaffected. Poorer physical and mental health, unhealthy sleep patterns and adverse changes in the risk factors for heart disease were found among employees working in an executive agency; as well as, those workers who were awaiting transfer an executive agency.

The study concludes that due to the economic recession and deregulation of the 1990's, workers in most post industrial countries were affected to some extent by downsizing. There is a growing body of evidence to suggest that downsizing is associated with an increase in overall ill health among survivors of cutbacks, increases in medically certified sickness absence and premature death from heart disease. The benefits of

organizational change have been limited and have brought about the unexpected costs of decreased motivation, morale and loyalty among employees.

2.1.3. Globalization: Impact on the Determinants of Health

The impact of globalization through corporate downsizing on employee health negatively influences the social determinants of health and contributes to the burden of illness. In 2000, a panel of social and health policy experts sought to "consider the state of key social determinants of health in Canada and explore the implications for the health of Canadians" (PHAC, 2004, p. 1). The experts concluded that globalization is the driving force behind workforce rationalization. It breeds income and job insecurity by shifting the workforce from full-time employment to temporary, part-time, casual and contract positions in an effort for organizations to remain competitive in the global market. Globalization has led to high levels of workplace stress and causes problems related to work-family balance. Survivors of cutbacks face an increased risk of occupational injury and disease through extended work hours, job insecurity, and decreased job control. The panel also revealed that one half of working Canadians are facing threats to income and job security as a direct result of globalization (PHAC, 2004).

The World Health Organization (2003) has compiled empirical evidence on the determinants of health and health outcomes related to unemployment, job insecurity, working conditions, and prolonged stress. The potential health outcomes include:

- Continuing anxiety, lack of control; over work and home life, have powerful effects on health. These psychosocial risks accumulate over life and increase the risk of poor mental health and premature death.
- Stress in the workplace increases the risk of disease.
- Employees with control over their work have better health.
- Inadequate rewards for effort put into work, has been associated with heart disease. Rewards can take form of money, status, and self-esteem.
- Unemployment poses a risk to health, the risk increases in regions of widespread unemployment.
- Unemployed workers and their families suffer a substantially increased risk of premature death.
- The threat of job insecurity is associated with negative health effects.
- Job insecurity has been associated anxiety, depression; self reported ill health, heart disease and its risk factors.
- Globalization and workforce rationalization increased feelings of job insecurity. Prolonged job insecurity acts as a chronic stressor whose effects grow with length of exposure. It increases employee absenteeism and health service use.
- Strong social networks improve health at home, at work, and in the community.
- Supportive relationships may improve health related behaviors. (pp. 12-22).

Research has established that downsizing has a significantly detrimental effect on family relationships. Survivors of cutbacks experience difficulty meeting responsibilities at home, experience marital tension, spend less time with their family and become more irritable when interacting with family members (Shore, 1999).

2.1.4. Implications for Future Populations

Researchers have repeatedly demonstrated that employees who are laid-off and those who survive job cutbacks are at high risk of negative health consequences. Globalization and corporate downsizing causes increased stress in the workplace and in the lives of current and former employees. Research has repeatedly demonstrated that globalization poses threats to job status, decreases job control, and increases the physical demands of the worker.

Corporate downsizing affects the informal social support networks of current and former employees and negatively impacts the physical and mental health of workers (Bosma, Marmot, et al., 1997; Schnall, Landsbergis, & Baker, 1994; Kivimaki, Vahtera, Pentti, & Ferri, 2000).

In Canada, sickness absence rates have been increasing for both men and women since 1998 (Statistics Canada, 2001). Canadian claims related to stress have risen from 10% of all disability claims to more than 30%. Stress due to overwork is said to cost Canadian taxpayers approximately 12 billion in lost productivity and other costs (Foley and Polanyi, p. 178)

3.0. Methodology

3.1. Research Design

This study used a cross-sectional survey of a designated cohort. The data was collected through a self administered, online questionnaire (see Appendix E). The SF-12v2 (Quality Metric Incorporated & Medical Outcomes Trust., 2002) was used to collect health related data. The independent variables included demographic data, personal characteristics and job characteristics. The dependent variables included physical and mental health indicators. The length of time required to complete the questionnaire was estimated to be no longer than 10 minutes. The survey was available online for a three week period (September 11, 2006 – September 30, 2006).

3.2. Population

The sample for this survey was drawn from a target population of unionized individuals employed at a national railway (CN Rail), who had experienced the effects of privatization and corporate downsizing as a function of globalization. Human Resources and Development Canada reported that "this organization has reduced its workforce from 36,570 in 1991, to 16,560 in 1997... indications are that further decreases in employment have occurred and will continue for the foreseeable future"(Government of Canada, 2005).

3.2.1. Sampling

A non-probability sampling approach was utilized for this survey. Data was collected from a convenience sample of the target population. Oversampling was used to ensure generalizability of the results.

3.2.2. Sampling Frame

The sampling frame consisted of unionized employees of CN Rail who were members of the Canadian Auto Workers (CAW), 5.1 bargaining unit. The CAW 5.1 bargaining unit represents 2193 members and consists of 5 CAW Locals (4001, 4002, 4003, 4004 and 4005). Jobs within this bargaining unit are a mixture of both white collar (Clerical, Customer Service, and Supply Management) and blue collar jobs (Labourer). White collar positions classified under the headings of clerical, customer service and supply management included: Car Checker, General Clerk, Waybill Clerk, Rate Biller, Timekeeper, Stores Clerk, Engineering Clerk, Industrial Services Clerk, Rate Advisor, Administrative Clerk, Carload Biller, Train Movement Clerk, Senior Transportation Clerk and Stores Attendants. Blue collar positions included: Labourers, Tractor-Trailer Operators and Motormen.

3.2.3. Sample Size

A convenience sample was utilized for this study; however, a minimum of $n = 327$ respondents was required to ensure a representative sample of the population.

3.3. Internal and External Validity

The Short Form 12, version 2 (SF-12v2) was used to measure the physical and mental health effects of corporate downsizing on the health of cut back survivors. The validity and reliability of this survey instrument had previously been established by the research community; therefore, no threats to internal or external validity were expected. To ensure a representative sample of the population and generalizability of the survey results to the total population a minimum sample of n = 327 was calculated using a confidence interval of 95% (Zalpha = 1.96) with a 5% (p=0.05) error margin. Over sampling of the population was employed to increase the response rate and decrease the potential of sampling bias.

3.4. Data Collection

Data was collected through an online questionnaire (see Appendix E).

The independent variable data collected included:

Demographic data

- age
- gender
- marital status
- level of education
- number of years employed at this organization
- occupation
- income

The dependent variable data collected included the following 8 domains of health: physical function, role physical, bodily pain, general health, mental health, role emotional, social function and vitality. A license (#27318) to use the SF-12v2 was acquired from the copyright holders, Quality Metric Incorporated & Medical Outcomes Trust.

3.5. Data Analysis

The SF12v2 scoring manual was not used for data analysis of this survey as initially intended by this author. Scoring of the results in this manner offered comparisons to the general US population only and was inappropriate for the objectives of this study. Data was instead entered into a SPSS software spreadsheet checked for outliers and the following statistical analyses were performed: number of respondents, mean, standard deviation, frequency, percent, correlation, Chi Squared analysis, independent t-test and multiple regression.

The 12 Likert type questions were stratified for age, gender, income, marital status, occupation, education and years of seniority. Following the initial analysis of data, marital status, age, income and years employed at the organization were recoded and reanalyzed. Marital status was recoded into two groups; respondents in a relationship (married or living common law) and those not in a relationship (all others). Age was recoded to reflect respondents 49 years or younger and respondents 50 years and over. Income was recoded to reflect respondents who earned $50,000 or less and respondents who earned more than $50,000 per annum. Years employed at the organization was

recoded to reflect respondents with 20 years of seniority or less and respondents with 21-30 seniority.

Four questions were recoded and reversed scored. The rationale offered by the authors of the SF12v2 survey was that a high score on the above mentioned items would indicate:

- better general health perceptions
- a higher level of vitality
- lack of bodily pain
- better mental health

These items included self-rated health, vitality, pain and one item (question 6a) which pertained to mental health.

3.6. Recruitment Procedures

Potential participants were identified by the regional office of CAW 5.1 bargaining unit. A cover letter was posted in each work place and an e-mail sent to each non-retired union member by the regional office and/or the Local Chairpersons (see Appendix B).

3.7. Harm and/or Potential Risks

There were no known risks to potential respondents and no harm was anticipated to occur as a result of participating in this survey. No harm or risks were anticipated to occur to third parties who were responsible for distributing the cover letters to potential respondents.

3.8. Deception

Deception was not intended, nor expected to occur in the course of this research study.

3.9. Informed Consent

Informed consent was sought from union executive officers (see Appendix D). A cover letter (see Appendix C) outlining the purpose, objectives and method was provided. Consent was granted by the CAW 5.1 bargaining unit representatives and its membership. Cover letters (see Appendix A) were designed to provide potential survey respondents with detailed information. Participant consent forms (see Appendix B) were drafted and posted online. To be granted access to the survey, potential participants were first required to fill out the consent form and indicate with a checkmark that they had read the consent form and agreed to participate.

3.10. Anonymity and Confidentiality

Anonymity and confidentiality was assured in this study. No personal or identifying information was requested in the questionnaire. To preserve anonymity as set out in the Tri Council Policy Statement, description of occupation was limited to indicating whether the participant was employed in either a white collar or blue collar position. To inquire about the participant's actual occupation may have placed the participant at risk of identification by the employer or peers. To further protect the anonymity and confidentiality of survey participants, the survey website did not track IP addresses.

3.11. Discussion

Globalization is the driving force behind workforce rationalization. Half of working Canadians face threats to income, and face job insecurity (PHAC, 2004, p. 2). Research has demonstrated that corporate downsizing; a function of globalization, contributes to, and compounds the burden of illness and injury. The survivors of workforce rationalization report increased job strain, and low levels of job control. These factors are known to impact mental health, and increase the risk of cardiovascular disease (Bosma, Marmot, Hemingway, et al., 1997; Schnall, Landsbergis, & Baker, 1994). The World Health Organization (WHO) has recognized the negative effect of globalization on workplace health, and believes that stress in the workplace increases the risk of disease. Continuing anxiety and lack of control over work are psychosocial factors that accumulate over life, and increase the risk of poor mental health, premature death, and self reported ill health (WHO, 2003). Research that measures the true impact of corporate downsizing on employee health is limited.

3.11.1. Need for Research

Romanow (2002) discusses globalization and the various free trade agreements which have the potential to impact the Canadian health care system (pp. 233-246). However, the effects of globalization through corporate downsizing have far more reaching consequences which may impact the health of a community, a region or the overall population of the nation.

Polyani and Tompa (2002) believe that current models of work and health may not be capturing the full range of experiences of workers in today's economy and suggest that

health effects of changing labour markets and firm strategies deserve greater attention, both at the research and policy levels.

The current knowledge base related to the impact of globalization through corporate downsizing on employee health consists of research that focuses on a particular disease or outcome. To date no research has been conducted that measures the overall, actual or perceived self reported physical and mental health of employees affected by workforce rationalization.

Osterman (cited in Polyani & Tompa, 2002) states that the institutional structure of the labour market has been transformed over the last 25 years. He emphasizes that traditionally lay offs of the workforce occurred where there was a need to downsize in response to a downturn in the economy; however, today lay offs are being used to rationalize operations in thriving markets.

3.11.2. Privatization of CN Rail

Over the past decade, CN Rail has experienced numerous cutbacks to their workforce as a result of the company's privatization in 1995. Formerly a crown corporation, the Canadian government privatized CN Rail in 1995. With the acquisition of the Illinois Central Railway in February of 1998, CN Rail became a transnational corporation with shares listed on both the New York Stock Exchange and the Toronto Stock Exchange. In October 1998, Chief Executive Officer (CEO), Paul Tellier, announced massive layoffs and CN's plan to reduce the workforce by 14%, or 3,000 workers. CN Rail employed 36,000 workers in 1992, only half of these jobs would exist after the announced job cuts. The House of Commons expressed their concern over the

impending workforce reduction, as the company was not losing money. The company cited changing technology and shrinking profits as its motives for downsizing (CBC, 1998).

In July of 2000, CN attempted to acquire the Burlington Santa Fe Railway, however, the US Surface Transportation Board (STB) did not approve the merger. One year later the STB did approve CN's acquisition of the Wisconsin Central Railway. In November of 2002, more job cuts were announced. This time CN Rail stated that it would reduce its workforce by approximately 5%, eliminating 1146 more jobs. Two thirds of the cuts would be made in Canada and the rest in the United States. President and CEO, Paul Tellier commented "...CN must leave no stone unturned in this productivity initiative given difficult conditions in our bulk commodity business and escalating labour costs" (CBC, 2002).

Under the direction of its new President and CEO, E. Hunter Harrison, CN acquired the railway assets of Great Lakes Transportation in October 2003. One month later CN also announced the acquisition of BC Rail, Canada's third largest railway (CBC, 2003).

According to the CN Rail website, the company has expanded further. In 2005 CN Rail established CN Worldwide, a wholly owned subsidiary of CN Rail which specializes in "door to door trans Atlantic and trans Pacific shipping" which focuses on moving freight between Europe, Asia and North America and whose offices are located in Canada, the United States, China, Central and Southern Europe.

Acquisition highlights from 2006 include the purchase of Alberta short line railways (MacKenzie Northern Railway, Lakeland and Waterways Railway, Central Western Railway, and the Savage Alberta Railway Inc.). In addition, CN Rail acquired the remaining 51% of SLX Canada Inc a company engaged in equipment leasing (Canadian National Railway Company, 2007).

CN posted a free cash flow of 1.3 billion dollars, for the year ending December 31, 2005 (CN, 2006). This organization is the ultimate example of lay offs being used to rationalize operations in thriving markets. CN has become a transnational corporation as a result of privatization in 1995. Unionized employees in this organization have faced actual cutbacks and threats of cutbacks for over 10 years and have been chosen as potential study participants due to their constantly changing work environment.

WHO (2003) has compiled empirical evidence related to the key determinants of income, employment and working conditions. Impingement on one determinant or any combination thereof, may pose a great risk to physical and mental health and may increase the use of health services, which currently remain scare and over taxed in many regions of the country.

The primary sector of the workforce lays the foundation for secondary industry to either flourish or flounder; therefore, globalization has the potential to impact the determinants of health of an entire community, region or nation. Northwestern Ontario (NWO) has been impacted by numerous primary industry lay offs and closures over past years. The population health model suggests that a strong relationship exists between income, employment and health. Health indicators for the Thunder Bay Health Region;

such as life expectancy and self reported health, suggest a poorer overall health status for residents of Northwestern Ontario than their national and provincial counterparts (Statistics Canada, 2001).

Globalization and corporate downsizing are realities that the Canadian workforce faces on a continual basis. One half of working Canadians face threats to income and job security, placing a significant proportion of the workforce at risk for negative health outcomes (PHAC, 2004). Knowledge of the overall health effects of this global phenomenon is limited; more research is required to fully understand the health implications for current and future generations.

3.11.3. Benefits to Subjects and/or Society

The anticipated benefits of this research to the subjects and/or society include:

1. Contribution to the existing knowledge base of globalization's effects on the health of the workforce.
2. Development and/or improvement of occupational health promotion programs that target the negative health outcomes of corporate downsizing on employee health.
3. The results may influence governments to improve existing occupational health policies and better understand the impact and implications of current and future free trade agreements on the health of Canadian workers.
4. The results may be used by labour organizations to advocate for a healthier workplace, improved health benefits and better working conditions.

3.12. Conclusion

Canadian workers who have lost their jobs as a result of workforce rationalization face bleak re-employment prospects, high levels of stress, lower socioeconomic status, and reduced informal social support networks. The cumulative effect of these factors results in poorer health status, increased risk of disease, and premature mortality of employees who lose their jobs, workers who survive the cutbacks, and their respective families. Survivors of job cutbacks are at increased risk of occupational injury due to the increased job demands and ongoing stress related to job insecurity.

Globalization is directly responsible for the shift from full-time employment to temporary, casual, and part-time positions. Young Canadians entering the workforce find they must juggle several jobs in an effort to sustain themselves and their dependants. Young Canadians are at greater risk of health consequences, and earlier onset of chronic disease as they face a lifetime of exposure to stress and job insecurity. Existing trade agreements such as NAFTA and GATS significantly impact the social determinants of health and compromise the health of all Canadians.

Limited research on the direct impact of corporate downsizing (as a function of globalization) on employee health exists. More research is required to fully understand not only the economic impact of globalization, but also its impact on the social determinants of health and overall health status of the workforce employed in the primary sector of the Canadian economy.

4.0. Results

The following chapter presents the results for the collection of data relative to the research question which sought to assess the relationships between self-reported health and the negative physical and mental health outcomes among survivors of corporate job cutbacks employed in the primary sector of the workforce.

4.1. Demographic Data

Of the total sample (N=31), 74.1% were male and 25.9% were female (M = 1.26, SD = 45). The average age of employees (Figure 4.1.1) ranged between 45-49 years (M = 3.10, SD = .94).

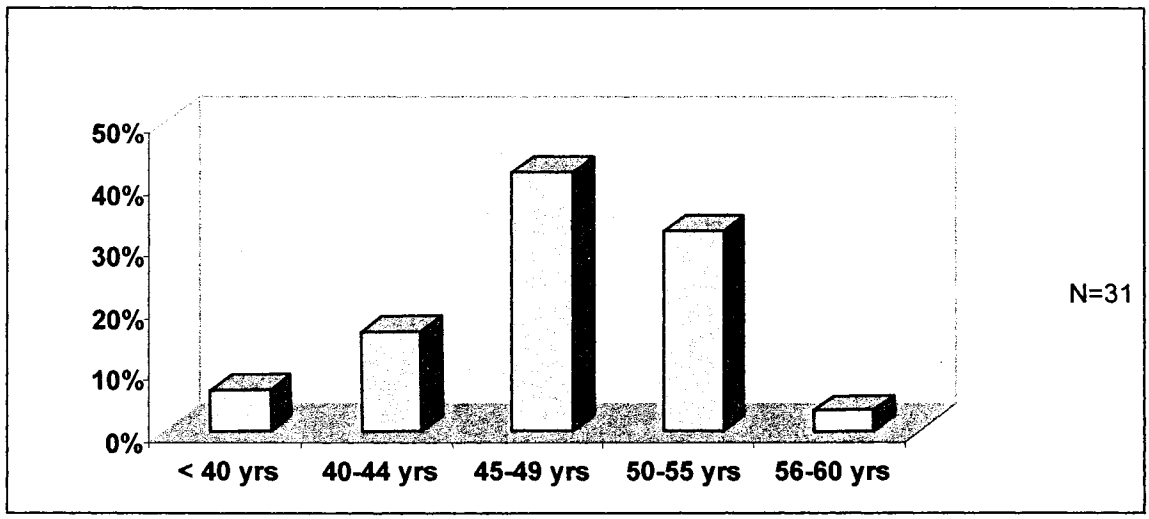

Figure 4.1.1. Average age of respondents.

Overall, 56.7% of the sample was married (Figure 4.1.2), 13.3% were living common law, 13.3% were separated, 6.7% divorced, and 10% were single and never married, none were widowed (M = 3.20, SD = 1.82).

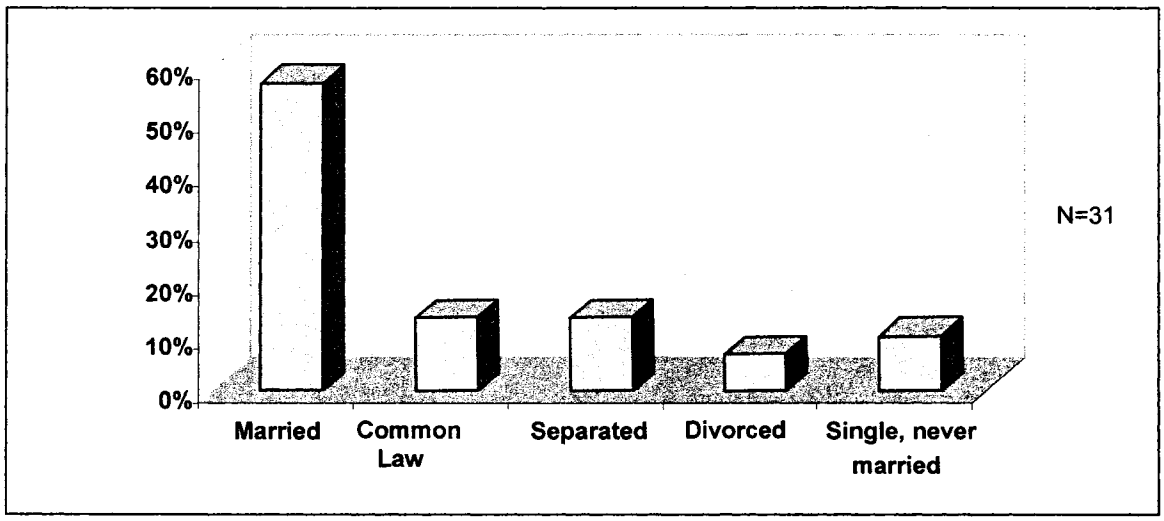

Figure 4.1.2. Marital status of respondents.

More than half of the total sample (54.8%) reported high school as the highest level of education they had attained (Figure 4.1.3); 19.4% graduated from college, 16.1% received a university degree and 9.7% received training from a technical or vocational institution (M = 2.97, SD = 1.20).

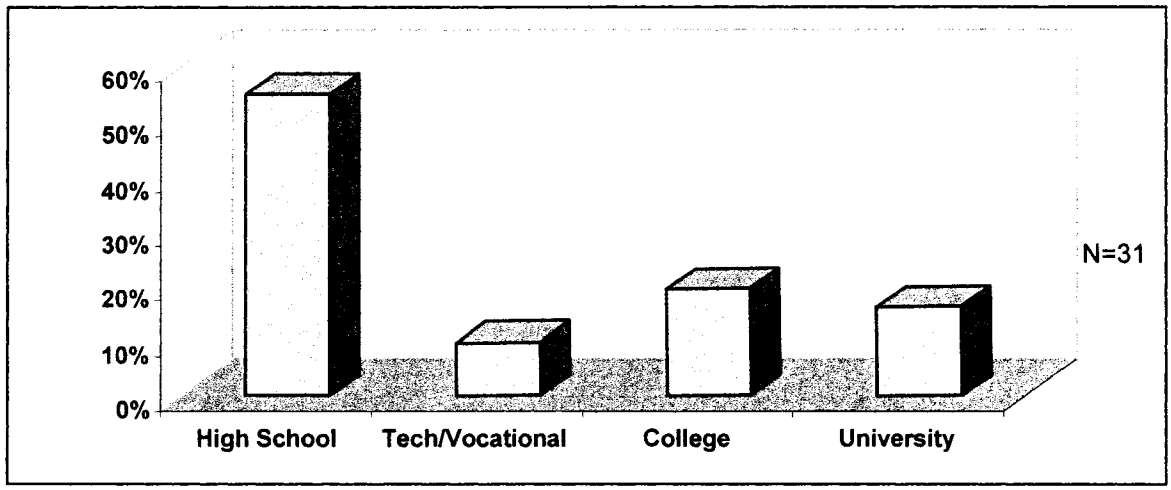

Figure 4.1.3. Highest level of education attained.

Figure 4.1.4 provides an overview of the number of years respondents have been employed within the organization on average. The majority of respondent's had been employed at this organization 26 to 30 years (M = 3.29, SD = .97) and were predominantly (93.5%) white collar workers (M = 1.06, SD = .250). Respondents earned between $51,000 and $55,000 per year on average.

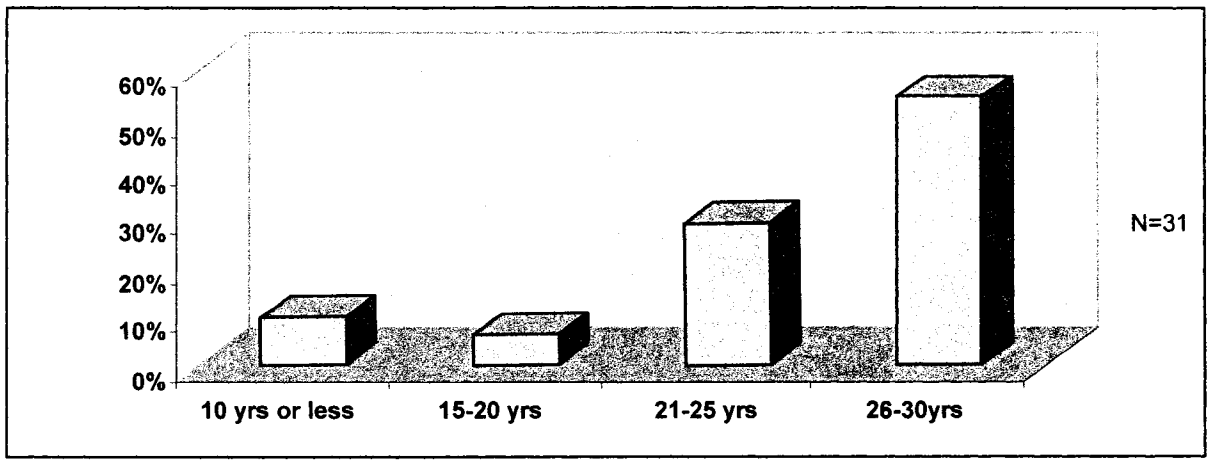

Figure 4.1.4. Years employed at organization.

4.2. Self Reported Health

More than half (54.8%) of the total sample reported their health was excellent or very good compared with 60.1% of the general Canadian population (Statistics Canada, 2005). Overall, 12.9% of respondents rated their health "excellent", 41.9% "very good", 32.3% of respondents rated their health as good, 9.7% rated their health fair and 3.2% suffered from poor health (Figure 4.2.1).

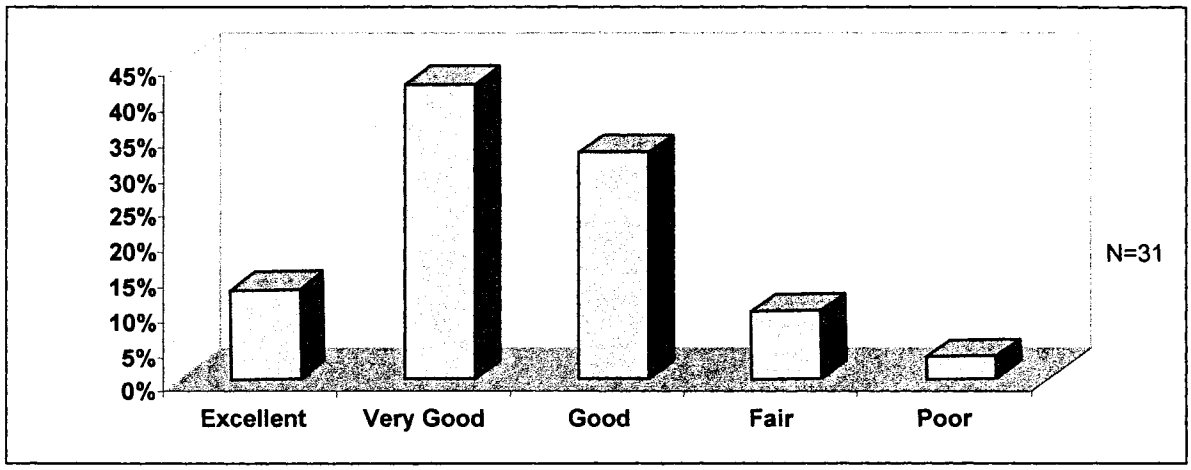

Figure 4.2.1. Self reported health among the total sample.

4.2.1. Self Reported Health and Age

Age was not significantly related to health as demonstrated by χ^2 (N = 31, df = 16) = 10.70. An overview of self-reported health stratified by age is provided in Figure 4.2.2. Of the total sample under the age of 40 years, 50% stated their health was "excellent" and 50% believed their health was "good". More than half (60%) of respondents aged 40-44 years stated their health was "very good". More than one third of respondents aged 45-49 rated their health as "good" and half (50%) of survey

respondents aged 50-55 perceived their health was "very good". All respondents (100%) aged 56-60 reported "very good" health.

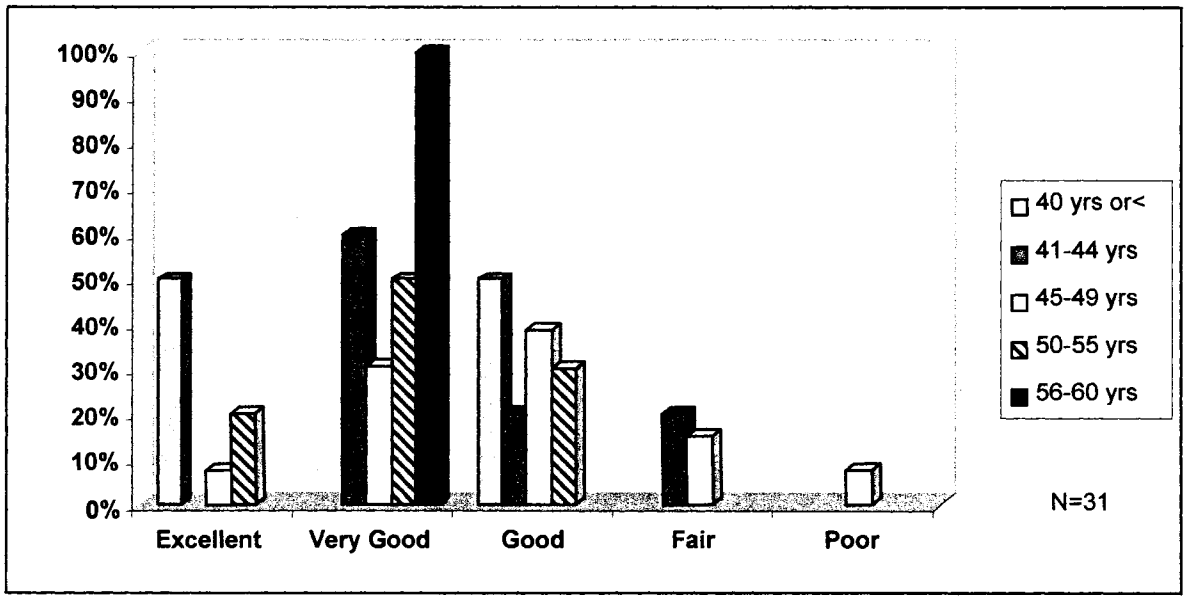

Figure 4.2.2. Self reported health and age.

4.2.2. Self Reported Health and Gender

Gender was not significantly related to health χ^2 (N= 27, df = 4) = 3.82. Self-rated health scores among males in the sample (M = 2.5, SD = 1.00) did not significantly differ from the self-rated health scores of females (M = 2.42, SD = 1.13), t (25) = .157). Among male respondents 10% rated their health as "excellent", half (50%) believed their health was "very good" followed by 25% who rated their health as "good". The majority (42.9%) of female respondents rated their health as "good"; however, 28.6% enjoyed "excellent" health and none suffered from poor health (Figure 4.2.3).

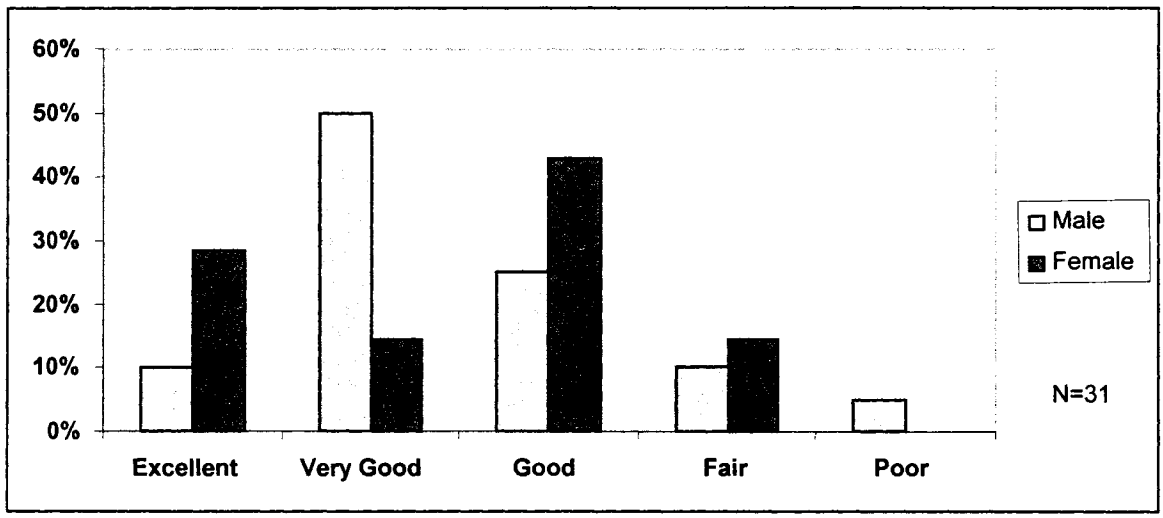

Figure 4.2.3. Self reported health and gender.

4.2.3. Self Reported Health and Marital Status

Among survivors of job cutbacks, marital status was not significantly related to health χ^2 (N = 30, df = 16) = 13.64. The self-rated health scores of those respondents who were married or living with a significant other (M = 2.35, SD = 1.06) did not significantly differ from those not in a relationship (M = 2.54, SD = .776), t (28) = .532, p = .599. Almost half (47.1%) of married respondents reported their heath was "very good". Fifty percent of respondents who were living with a significant other and 75% of respondents who were separated rated their health as "good". Half (50%) of all divorced respondents reported their health was "very good" and 50% of divorcees believed their health was "fair". Among respondents who were single or never married, 66.7% rated their health as "very good" compared with 33.3% who stated their health was "good" (Figure 4.2.4).

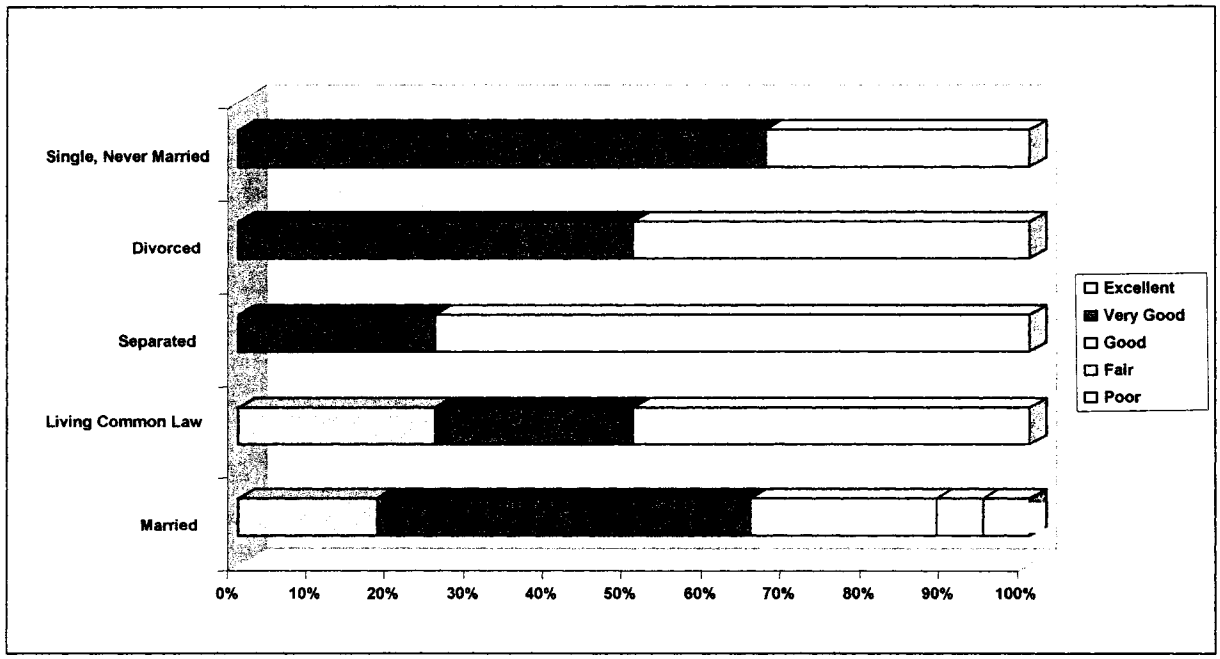

Figure 4.2.4. Marital status and self reported health status.

4.2.4. Self Reported Health and Income

Overall, income was not significantly related to health (N = 29, df = 16) = 14.84 among survivors of job cutbacks. Respondents who earned more than $50,000 per year (M = 2.42, SD = .902) did not differ significantly on health scores than respondents whose annual income was less than $50,000 per year (M = 3.33, SD = 1.53) t (27) = -1.55, p = .133. The majority of respondents who rated their health as "excellent" (50%) or "very good" (50%) earned between $55,000 and $60,000 per year (Table 4.2.1).

Table 4.2.1.

Self reported health and yearly income.

Yearly Income	Excellent	Very Good	Good	Fair	Poor
$41,000 - $45,000	-	33.3%	33.3%	-	33.3%
$46,000 - $50,000	14.3%	28.6%	42.9%	14.3%	-
$51,000 – $55,000	12.5%	43.8%	31.3%	12.5%	-
$56,000 - $60,000	50.0%	50.0%	-	-	-
More than $60,000	-	-	100.0%	-	-

4.2.5. Self Reported Health and Education

Level of education was significantly associated with health among survivors of job cutbacks. Chi Square analysis revealed a relationship between level of education and health status χ^2 (N = 31, df = 12) = 24.38, p = .018 (Table 4.2.2). Among the total sample, health scores did not differ significantly between those who had attained post secondary education (M = 2.36, SD = 1.22) and those who had attained a lower level of education (M = 2.59, SD = .712), t (29) = .660, p = .515. Multiple regression analysis was calculated to predict health status from level of education. The R Square (.017) was not significant, F (1, 29) = .505, p = .483. Higher levels of education were associated with better health.

Table 4.2.2

Self reported health and education.

Highest Level of Education	Excellent	Very Good	Good	Fair	Poor
High School	-	52.9%	35.3%	11.8%	-
Technical/Vocational	33.3%	-	33.3%	-	33.3%
College	50.0%	16.7%	33.3%	-	-
University	-	60.0%	20.0%	20.0%	-

4.2.6. Self Reported Health and Years Employed Within Organization

According to the Public Health Agency of Canada (2004), only two-thirds of the Canadian employed workforce is in standard salaried jobs with no defined end date (mostly provided by large firms and the public sector). In this shrinking core job market, workers who have survived layoffs, privatization and contracting-out are generally working longer and harder. Employers have tried to increase profitability and competitiveness and to contain budgets by boosting productivity. This has been accomplished largely by increasing workloads. Most Canadian unions have adopted formal policies relating to workplace health and safety, work/family balance, work reorganization and access to training, and have paid some attention to each of these quality of work-life issues in bargaining. However, there are continuous pressures to

increase productivity and to maintain employment and wages, which tend to mitigate against an agenda of creating more healthy workplaces (PHAC, 2004).

Among survivors of job cutbacks, the number of years employed at this organization was significantly related to health status χ^2 (N = 31, df = 12) = 27.73, p = <.01, (Figure 4.2.5). Among the total sample health scores did not differ significantly between respondents with 20 years or less seniority (M = 2.33, SD = 2.31) and respondents with more 21-30 years seniority (M = 2.50, SD = .793) t (29) =.124, even though employees who had worked at this organization for 20 years or more reported better health on average. Multiple regression analysis revealed that the number of years employed at the organization was not a predictor of health.

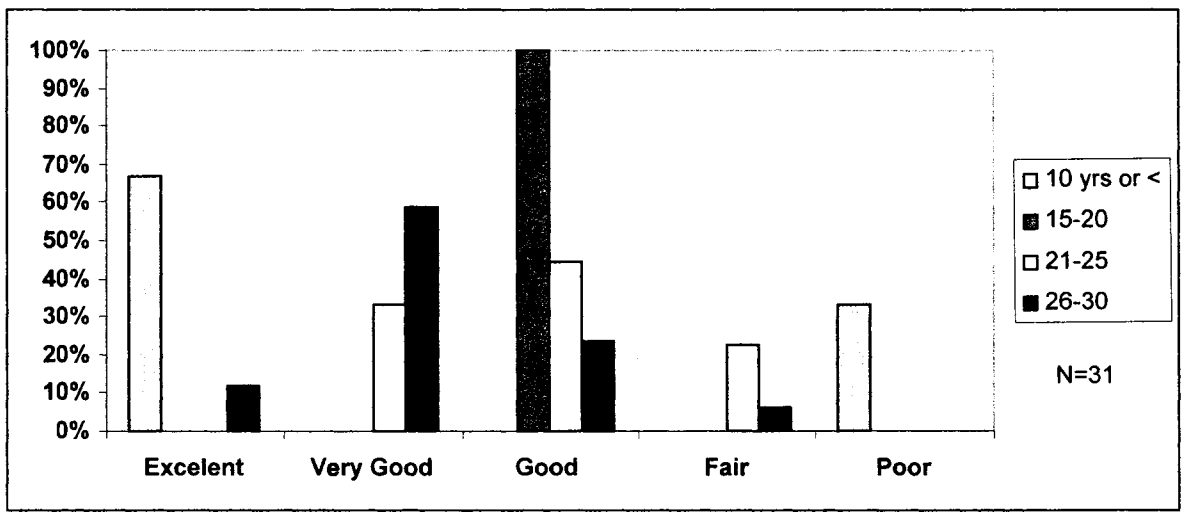

Figure 4.2.5. Self reported health and number of years employed at organization.

4.2.7. Self Reported Health and Occupation

Occupation was not significantly associated with health status. No significant relationship existed between occupation and health status χ^2 (N = 31, df = 4) = 5.05, p = .283. The self-reported health scores of white collar workers (M = 2.41, SD = .946) did not significantly differ from blue collar workers (M = 3.5, SD = .707) t (29) = -1.583, p = .124. Multiple regression analysis determined that occupation (white collar, blue collar) was not a predictor of health within the sample (Figure 4.2.6).

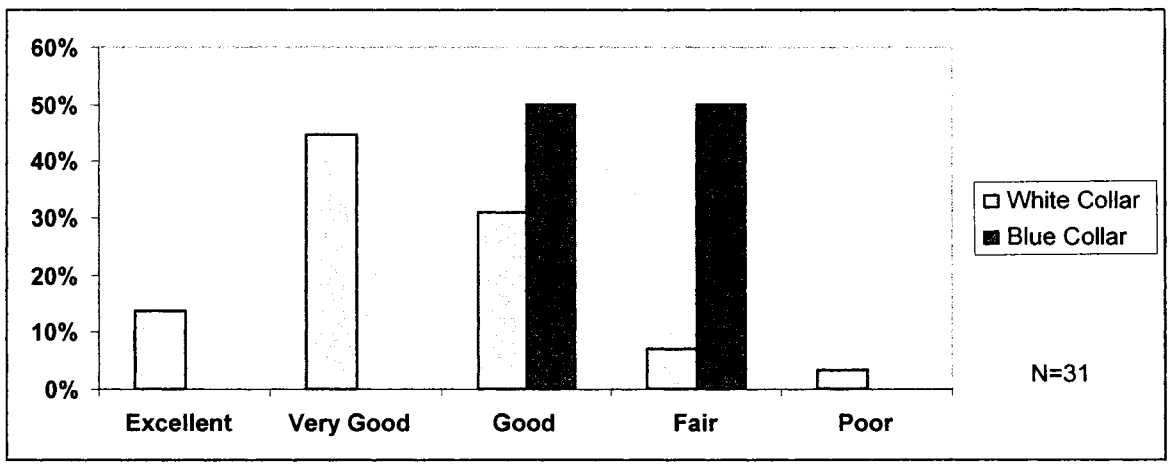

Figure 4.2.6. Occupation and self reported health.

4.3 Physical Functioning

Overall, a high level of physical functioning was found among the sample. More than half of the total sample (64.5%) reported they had no limitations performing moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf. Approximately one quarter (25.8%) of respondents were "limited a little" and 9.7% reported they were "limited a lot" with performing moderate activities.

More than half of the total sample (53.5%) reported no limitation in climbing several flights of stairs; 33.3% were "limited a little" and 9.7% were "limited a lot".

Occupation was significantly related to performing moderate activities χ^2 (M = 31, df = 2) = 6.15, p = .046. All non-clerical survey respondents (100%) reported they were "limited a little" compared to 69% of white collar workers who reported no limitations with performing moderate activities as a result of their physical health. Multiple regression analysis found that occupation was not a predictor of the ability to perform moderate activities. Climbing several flights of stairs was not related to any of the covariates.

Table 4.3.1

Percentage of all respondents reporting limitations performing moderate activities as a result of physical health during the past 4 weeks, within occupation.

	Limited a lot	Limited a little	Not limited at all
White collar	10.3%	20.7%	69.0%
Blue collar	-	100.0%	-

4.4. Physical Health, Work and Regular Daily Activities

Table 4.4.1 provides an overview of the effects of physical health status on the ability to perform regular daily activities. Approximately one quarter of the sample (25.8%) reported they accomplished less than they would have liked as a result of their physical health. Approximately one third of the sample (66.6%) reported they had little or no limitations in the type of work or activities they were able to perform.

Table 4.4.1

Percentage of all respondents reporting limitations in the type of work or other activities and those accomplishing less than they would like as a result of physical health status during the past 4 weeks.

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
Accomplished less than you would like	16.1%	9.7%	25.8%	29.0%	19.4%
Were limited in the kind of work or other activities	10.0%	6.7%	16.7%	43.3%	23.3%

4.5. Emotional Health, Work and Regular Daily Activities

Overall, approximately one third of the sample (32.3%) reported that they accomplished less than they would have liked "all of the time" (12.9%) or "most of the time" (19.4%) as a result of their emotional problems. Almost one third (29.1%) also reported performing work or other activities less carefully than usual "most of the time" (22.6%) or "all of the time" (6.5%) as a result of their emotional problems. Gender was related to performing work activities less carefully than usual χ^2 (N = 27, df = 4) = 9.54, p = .049.

Table 4.5.1

Percentage of all respondents who reported accomplishing less than they would like and performed work or other activities less carefully than usual during the past 4 weeks.

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
Accomplished less	12.9%	19.4%	19.4%	25.8%	22.6%
Worked less carefully	6.5%	22.6%	16.1%	22.6%	32.3%

Females were more likely to report performing work activities less carefully (Table 4.5.2). Age, marital status, education, occupation, yearly income and number of years employed at this organization were not significantly correlated to; or predictors of, limitations in the amount or type of work or regular daily activities among the sample.

Table 4.5.2

Percentage of all respondents who reported working or performing other activities less carefully than usual during the past 4 weeks, within gender.

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
Male	10.0%	20.0%	5.0%	25.0%	40.0%
Female	-	42.9%	42.9%	-	14.3%

4.6. Pain

According to the 2000 Canadian Community Health Survey (PHAC, 2003), 16% of the population aged 12 years and older suffered from chronic pain (14% males versus 18% females). Among survivors of job cutbacks approximately two-thirds (67.6%) of the survey sample reported some degree of interference with their normal work activities (both outside the home and housework) as a result of pain. More than one third (38.7%), reported no interference with work activities as a result of pain (Table 4.6.1).

Table 4.6.1

Percentage of all respondents reporting interference with normal work or activities as a result of pain during the past 4 weeks.

	Not at all	A little bit	Moderately	Quite a bit	Extremely
Pain interfering with work or activities	38.7%	38.7%	9.7%	9.7%	3.2%

Epidemiologic, clinical and experimental studies have all consistently found that the burden of pain is greater for women than for men (PHAC, 2003). Although no significant associations or relationships were found to exist between chronic pain and gender among survivors of job cutbacks, a higher proportion of women (85.9%) reported varying degrees of interference with normal work activities as a result of pain than men (55.0%).

Furthermore, the 2000 Community Health Survey also found that the prevalence of chronic pain increased with age in both sexes. Among survivors of job cutbacks, age was significantly related to pain interfering with normal work activities χ^2 (N = 30, df = 4) = 6.61, p = .014 however older respondents between the ages of 50 and 60 years, (M = 1.36, SD = .505) reported significantly less interference with normal work activities as a result of pain than respondents aged 49 years and under (M =2.35, SD = 1.18), t (29) = 3.23, p = .014 (Table 4.6.2).

Table 4.6.2

Pain interfering with normal work activities (49 yrs and under and 50 yrs and over) during the past 4 weeks.

	Not at all	A little bit	Moderately	Quite a bit	Extremely
49 yrs or under	25.0%	40.0%	15.0%	15.0%	5.0%
50 yrs and over	63.6%	36.4%	-	-	-

Multiple regression analysis was conducted to predict age from pain interfering with normal work activities. The R Square (.19) was significant, $F(1, 29) = 6.882$, $p = .014$. Age was a predictor of pain interfering with normal work activities. Lower frequency of pain interfering with normal work activities was associated with older age cohorts (50 – 60 years). Years of service at the organization was not significantly related to pain interfering with normal work activities χ^2 ($N = 31$, $df = 4$) $= 3.07$, $p = .546$.

4.7. Emotional Well-Being

Table 4.7.1 provides an overview of emotional well-being in the sample. Overall, 83.9% of the sample reported feeling downhearted and depressed with varying degrees of frequency. According to the 2002 Canadian Community Health Survey – Mental Health and Well Being (PHAC, 2006) only 0.3% of the general Canadian population reported suffering from a dysthymic disorder, or experiencing dysthymia (a chronically depressed mood – lasting at least 2 years). Only 6.5% of respondents reported feeling calm and

peaceful "all of the time". Overall, 32.3% reported feeling calm and peaceful "most of the time", 25.8% "some of the time", 29% "a little of the time" and 6.5% "none of the time".

Table 4.7.1

Percentage of all respondents reporting feelings of being downhearted and depressed and calm and peaceful during the past 4 weeks

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
Felt downhearted and depressed	3.2%	32.3%	38.7%	12.9%	2.9%
Felt calm and peaceful	6.5%	32.3%	25.8%	29.0%	6.5%

Age was significantly associated with feeling calm and peaceful ($r = -.357$, $p = .049$). Survey respondents 50 years and over ($M = 2.45$, $SD = 1.04$) differed significantly from those 49 years and younger ($M = 3.25$, $SD = 1.02$) $t(29) = 2.067$, $p = .048$. The R Square (.128) was also significant $F(1, 29) = -2.067$, $p = <.048$. Higher levels of calm and peacefulness were associated with older age cohorts (50 – 60 years). No significant correlations or relationships were found among the covariates and feeling downhearted and depressed.

4.8. Vitality

Overall, 9.7% of the sample reported that they had a lot of energy all the time (see Table 4.8.1). Almost one-fifth of the sample (19.4%) reported that they had a lot of energy "none of the time". The majority of the sample (45.2%) reported that they had a lot of energy "some of the time". Vitality was not significantly correlated with any of the covariates. Vitality was not significantly related to any of the covariates.

Table 4.8.1

Frequency of all respondents reporting vitality over the past 4 weeks.

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
Had a lot of energy	9.7%	9.7%	45.2%	16.1%	19.4%

4.9. Social Activities

Overall, more than one third (71.1%) of the sample reported that their physical or mental health interfered with social activities to some degree (Table 4.9.1). No significant correlations were found to exist among the covariates and social activities. Occupation χ^2 (N = 31, df = 4) = 8.91, p = .063, and years employed within the organization χ^2 (N = 31, df = 12) = 9.81, p = .632, were not significantly related; nor predicted, interference with social activities related to physical or emotional health status.

Table 4.9.1

Percentage of respondents reporting interference with social activities as a result of their physical or mental health status.

All of the time	Most of the time	Some of the time	A little of the time	None of the time
6.5%	6.5%	19.4%	38.7%	29.0%

Limitations 4.10

Limitations of this study include potential sampling bias due to the low participant response rate; therefore, the results of this study may not be generalizable to the total population.

5.0 Discussion

Self-reported health is an indicator of the overall health status of a population, which can reflect aspects of health not captured in other measures (Statistics Canada, 2004). More than half (54.8%) of the total survey sample reported their health was excellent or very good compared with 60.1% of the general Canadian population (Statistics Canada, 2005). This finding is consistent with the findings of Ferrie (1999) which suggest that employees who are experiencing job insecurity associated with privatization had a lower self rated health.

Massive job cuts have occurred since the privatization of CN rail in 1995. Similar to the findings of Shore (1999) and Burchell et al. (as cited in Foley and Polyani, 2006) the findings of this survey suggest that the negative health effects of job insecurity are long term and may not be immediately evident. Shore (1999) found that the stress which develops in a downsized work environment differs from traditional job stress. He states that it is long lasting and may reoccur with increasing intensity as job cuts both within the survivor's organization and other companies occur. Research by Burchell et al. (as cited in Foley and Polyani, 2006) also demonstrated that the effects of job insecurity were long term. Rather than adjusting to stressful working conditions over time, people appeared to lose their ability to cope.

Education is closely tied to income and social status. Education increases job opportunities, income security and job satisfaction. This determinant contributes to health by equipping individuals with knowledge and skills for problem solving, control and

mastery over life's circumstances and it improves the ability of individuals to access and understand health information (Pubic Health Agency of Canada, 2004).

The 1996-97 National Population Health Survey (NPHS) found that only 19% of respondents with less than a high school education rated their health as "excellent" compared with 30% of university graduates (PHAC, 2004). Among the survey sample of CN employees, level of education was significantly associated with health among survivors of job cutbacks; however, a significant difference in health scores did not exist between respondents who had attained higher and lower levels of education. Among survivors of job cutbacks, none of the respondents who had attained the minimum of a high school education reported excellent health status compared with 50% of university graduates.

According to the Population Health Model employment has a significant effect on a person's physical, mental and social health (PHAC, 2004). Although age was not found to be related to perceived health status among survey respondents, the number of years employed at this organization was significantly related to better health status. This finding may suggest that although job demands and levels of stress are higher in a downsized work environment in general, individuals with higher levels of seniority within an organization may perceive greater job security and/or may possess a higher sense of mastery and self esteem related to their job performance; therefore, are better able to cope with the increased job demands. Ferrie et al. (2004) suggest that union officials continue to strive to protect the job security of its members, and to advocate for more job control and effort-reward balance.

Income; which is a health determinant, has a significant and profound effect on personal health. Income determines social status, housing and living conditions and the ability to buy sufficient amounts of healthful foods. Health status improves at each step up the income and social hierarchy. At each rung up the income ladder Canadians experience less illness, longer life expectancies and improved health (PHAC 2002a). Only 47% of Canadians in the lowest income bracket rated their health as "excellent" or "very good" compared to 73% in the highest income group (Public Health Agency of Canada, 2004). A finding of this survey that was inconsistent with the Population Health Model was the relationship between income and self reported health. This study found no association or relationship between income and health even though respondents who earned $50,000 per year reported better levels of health than those who earned less, on average. A possible explanation for this finding is that on average, survey respondents earned between $51,000 and $55,000 per year; the average annual wage of a Canadian full time worker was only an estimated $43,298 per year (Statistics Canada, 2006).

A high level of physical functioning was found among the survey sample, however, it was below that of the general Canadian population. The proportion of cutback survivors who reported they had no limitations performing moderate activities (such as moving a table, pushing a vacuum cleaner, bowling or playing golf) was 64% compared with approximately 70% of Canadians aged 12 and over who reported being limited in selected activities (home, school, work and other activities) because of a physical condition, mental condition, or health problem which was expected to last 6 months or longer (Statistics Canada, 2006). Overall, 35.5% of the survey sample reported

they were limited "a little or a lot" compared with 29.6% of the general Canadian population who reported some degree of participation and activity limitation.

According to the Public Health Agency of Canada (2003), chronic pain affects individuals of all ages, ethnic backgrounds and both sexes. It is a major public health problem associated with deficits in quality of life, difficulties in psychological adjustment, depression, disability and reduced income potential. The economic cost of chronic pain to society is huge in terms of health care utilization, absenteeism from work, disability, high levels of medication dependence, and the failure of multiple and often expensive medical procedures (PHAC, 2003). Survivors of job cutbacks appear to suffer more interference with their normal work activities (both inside and outside the home) as a result of pain than the general Canadian population. Overall 38.7% of the survey sample reported no interference with work activities as a result of pain compared with 86.7.2% of the Canadian population who reported "no pain or discomfort or pain" or "discomfort does not prevent activity" (Statistics Canada, 2006). Among the survey sample a total of 61.3% of respondents reported that pain interferes with normal activities "a little bit, moderately", quite a bit or "extremely" compared with only 10.8% of the general Canadian population over age 12 who reported that pain prevents "a few, some or most activities" (Statistics Canada, 2006). This finding is consistent with the existing research that survivors of job cutbacks suffer from poorer health than the general population, overall.

Among survivors of job cutbacks, gender was related to performing work activities less carefully than usual. This finding is consistent with the population health model. According to PHAC (2004) many women have dual workloads. Women not only participate in the workforce, but also engage in many hours of unpaid work (housework, primary caregiver to children, family and older relatives). This ongoing dual workload; especially where little or no support is offered, tends to increase levels of stress and lower levels of job satisfaction. The National Population Health Survey (1996-1997) found that more women reported high work stress levels than men in every age category (PHAC, 2004). Women report substantially more work-life conflict than men, regardless of job type or dependent care status (PHAC, 2002b). This finding may suggest that women who are torn between the priorities of work and family responsibilities are at greater risk of emotional health problems when stressors from both environments (work, family) are compounded. The Public Health Agency of Canada (PHAC, 2004) suggests that governments provide incentives to employers to develop policies and practices that support efforts to balance home and work, and offer choices related to working hours.

Age was associated with higher levels of emotional well being among the survey sample. Survey respondents 50 years and older reported higher levels of calm and peacefulness. Further study of this finding is required to determine the buffering effect of aging on well being.

A higher proportion of survivors of job cutbacks reported feeling downhearted and depressed than the general Canadian population. Overall, 83.9% of the sample reported feeling downhearted and depressed with varying degrees of frequency.

According to the 2002 Canadian Community Health Survey –Mental Health and Well Being (PHAC, 2006) only 0.3% of the general Canadian population reported suffering from a dysthymic disorder, or experiencing dysthymia (a chronically depressed mood – lasting at least 2 years). This finding was consistent with the existing body of research (Morris, Cook, Shaper, 1994; Shore, 1999; WHO, 2003) that suggests corporate downsizing may have a detrimental effect on the mental health of the affected employees. Ferrie, et al. (2004) suggest that occupational health professionals develop health promotion programs which offer employees information specific to the effects of downsizing on mental health. Ferrie et al. (2004) also believe that employers need to be informed of the established association between lack of support from managers in the workplace and worsening mental health among employees.

Limitations of this study include potential sampling bias due to the low participant response rate; therefore, the results of this study may not be generalizable to the total population. Further research is required to better understand the impact of globalization through corporate downsizing on the health of the Canadian workforce.

6.0. Recommendations

In an effort to protect and improve the health of current and future survivors of job cutbacks the following recommendations are offered for the consideration of health planners and health agencies, labour organizations, union officials and government policy makers; however, it should be noted that the survey results were derived from a small sample (N=31) and may not be generalizable to the total population.

1. Governments, health agencies and health care professionals work together to increase awareness of the importance of literacy and education as a determinant of health among the general public, the health care sector and the social service sector (PHAC, 2003).
2. Governments and policy makers give thoughtful consideration to the health impact and increased health care burden globalization, free trade agreements and corporate downsizing has had; and continues to have, on the Canadian workforce prior to negotiating new, or expanding upon existing, trade agreements.
3. Labour organizations and union officials continue to strive to protect the job security of its members and advocate for more job control and effort reward balance by bargaining for adequate wages and reducing contracting out of services and casual employment (PHAC, 2004).
4. Union officials and occupational health professionals work together to advocate for, and ensure safe working conditions in a downsized work environment.

5. Occupational health professionals develop programs that offer employees information and education specific to the potential effects of corporate downsizing on physical and mental health and facilitate the referral of employees to community partners such as physicians, physiotherapists, and alternative health care professionals when and where appropriate.
6. Governments consider incentives to employers to develop workplace policies and practices that reduce work-life conflict, support efforts to balance home and work, and offer choices related to working hours (PHAC, 2004).

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Appendix A

Participant Cover Letter

Appendix B

Participant Consent Form

Appendix C

Institutional Cover Letter

September 6, 2006

To Whom It May Concern:

I am requesting the participation of your organization in a study entitled "Effects of Globalization on Employee Health". Your organization has been identified as suffering numerous job losses over the past decade due to privatization. The purpose of this study is to assess the impact of globalization, though corporate downsizing on the self reported physical and mental health of unionized individuals employed in the primary sector of the workforce.

The researcher will post a health questionnaire online. The survey site will be available from September 11, 2006 to September 30, 2006. I am requesting approval from your organization to distribute a paper copy and an e-mail invitation to all non-retired members in your bargaining unit.

To participate in this study, I request that your organization complete and return the enclosed consent form prior to September 12, 2006. Upon receiving the approval from your organization I will forward cover letters to the Local Chairpersons for distribution. I will also forward the Local Chairpersons an electronic copy to be distributed by e-mail to their respective Local members.

Your participation in this study is strictly voluntary and you may withdraw at any time. All information provided by participants of this study will remain strictly confidential and will be securely stored at Lakehead University. The questionnaires will be stored in a locked filing cabinet for seven years and will then be shredded. Upon completion of this study a copy will be available to your organization and individual union members on written request.

If you have any question, please feel free to contact me. You may also contact Lakehead University's Research Ethics Board at 343-8283.

Thank you in advance for your willingness to participate in this study.

Sincerely,

Rose-Marie Farwell, RN, BScN, MPH(c)
Phone: (807)345-2087
E-Mail: rfarwell@tbaytel.net

Appendix D

Institutional Consent Form

Informed Consent

The signature on this sheet indicates that CAW 5.1 agrees to participate in a study by Rose-Marie Farwell, R.N., BScN, MPH(c), entitled "Effects of Globalization and Corporate Downsizing on Employee Health".

The organization understands that during participation in the study, the regional offices of the CAW 5.1 bargaining unit will be responsible for the distribution of the questionnaire to non-retired union members.

The organization agrees to the following:

1. The organization is a volunteer and can withdraw from the study at any time.

2. No physical or psychological risks are foreseen as a result of participating in this study.

3. The information provided by the participants will remain confidential.

4. The organization will be provided and will distribute cover letters to all non retired union members who voluntarily express an interest in participating in this study.

5. Upon completion, the organization will receive a summary of the research study and its findings upon written request.

The organization has received explanations about the nature of the study, its purpose, and procedures.

Signature of Agency Representative (Please indicate your position)
Date

Appendix E

Health Questionnaire

Health Questionnaire

For each of the following questions, please mark an ☒ in the one box that best describes you.

Age:

☐ 40-44 years

☐ 45-49 years

☐ 50-55 years

☐ 55-60 years

☐ 60 + years

Gender:

☐ Male

☐ Female

Marital Status:

☐ Married

☐ Living common-law

☐ Widowed

☐ Separated

☐ Divorced

☐ Single never married

Yearly Income:

☐ less than $40,000

☐ $41,000 - $45,000

☐ $46,000 - $50,000

☐ $51,000 - $55,000

☐ $56,000 - $60,000

☐ more than $60,000

Highest Level of Education Completed:

☐ Grade 8

☐ High School

☐ Technical/Vocational School

☐ College

☐ University

Years employed at this organization:

☐ 10 or less years

☐ 15-20 years

☐ 21-25 years

☐ 26-30 years

☐ 35 + years

Occupation:

☐ White Collar (Clerical, Supply Management, Customer Service)

☐ Non-Clerical (Labourer, Tractor Trailer Operator, Motorman)

For each of the following questions, please mark an ☒ in the one box that best describes your answer.

1. In general, would you say your health is:

Excellent	Very good	Good	Fair	Poor
☐1	☐2	☐3	☐4	☐5

2. The following questions are about activities you might do during a typical day. Does <u>your health now limit you</u> in these activities? If so, how much?

	Yes, limited a lot	Yes, limited a little	No, not limited at all
a <u>Moderate activities</u>, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf	☐1	☐2	☐3
b Climbing <u>several</u> flights of stairs	☐1	☐2	☐3

3. During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
a Accomplished less than you would like	☐1	☐2	☐3	☐4	☐5
b Were limited in the kind of work or other activities	☐1	☐2	☐3	☐4	☐5

4. During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
a Accomplished less than you would like	☐1	☐2	☐3	☐4	☐5
b Did work or other activities less carefully than usual	☐1	☐2	☐3	☐4	☐5

5. During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?

Not at all	A little bit	Moderately	Quite a bit	Extremely
▼	▼	▼	▼	▼
☐1	☐2	☐3	☐4	☐5

6. These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks...

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
	▼	▼	▼	▼	▼
a Have you felt calm and peaceful?	☐1	☐2	☐3	☐4	☐5
b Did you have a lot of energy?	☐1	☐2	☐3	☐4	☐5
c Have you felt downhearted and depressed?	☐1	☐2	☐3	☐4	☐5

7. During the <u>past 4 weeks</u>, how much of the time has your <u>physical health or emotional problems</u> interfered with your social activities (like visiting friends, relatives, etc.)?

All of the time	Most of the time	Some of the time	A little of the time	None of the time
▼	▼	▼	▼	▼
☐1	☐2	☐3	☐4	☐5

Thank you for completing the survey.